

U.S. Patent Application Serial No. 10/648,356
Response filed February 17, 2006
Reply to OA dated November 17, 2005

REMARKS

Claims 8 - 20 are currently pending in this patent application, claims 8 and 16 being independent claims.

Independent claims 8 and 16 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the applicants regard as their invention. The applicants respectfully submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated November 17, 2005.

The Examiner again objects to claim 10, alleging that claim 10 is not commensurate with the specification, because the specification does not provide an antecedent basis for a layer interposed between a first layer and a second layer. The applicants respectfully request reconsideration of this objection.

The Examiner refers to the second full paragraph on page 7 which discloses that "...another layer may be interposed therebetween", and then refers to the previously amended paragraph of page 5 for determining which two layers are being referred to when the "another" layer is interposed.

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Such analysis results in the two layers being the second layer and third layer, thus the objection.

It is submitted that if the second full paragraph on page 7 is read in the context of the first full paragraph on page 7, then the first layer (MgF) and the second layer (TiON) would be the two layers between which “another” layer is interposed; and thus, an antecedent basis for claim 10 would be found.

In view of the above, the withdrawal of the outstanding objection to claim 10 is in order, and is therefore respectfully solicited.

The Examiner rejects claim 8 under 35 USC §112, second paragraph, alleging that a thickness of a third layer being smaller than $1/4$ wavelength cannot be determined as the wavelength is not defined. The applicants respectfully request reconsideration of this rejection.

A thickness of $1/4$ wavelength is used throughout the specification, and that it is the wavelength of “light” passing through the multilayer film. Therefore, in order to overcome the rejection, the specification has been amended in order to clarify the meaning of “smaller than $1/4$ wavelength”, and likewise, claim 8 has been amended in order to more clearly define the invention.

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Also, the Examiner rejects claims 16 - 18, alleging that claims that merely set forth physical characteristics desired in an article, and not setting forth specific compositions which would meet such characteristics, are vague and indefinite.

It is respectfully noted that the Examiner's suggestion, concerning the recitation of specific compositions, is understood. However, to adopt the Examiner's suggestion would unnecessarily narrow or limit the scope of the claims to which the applicants are entitled based on the cited prior art. Instead of adopting the Examiner's suggestion, the applicants have highlighted, in independent claim 16, the "optical reflection characteristics," and have further amended independent claim 16 in order to highlight the fact that the first optical reflection characteristics of the multilayer film and the second optical reflection characteristics of the multilayer film are substantially the same; and that the tensile stresses and compressive stresses of the first, second, and third layers substantially cancel each other.

In view of the above, the withdrawal of the outstanding indefiniteness rejection under 35 USC §112, second paragraph, is in order, and is therefore respectfully solicited.

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As to the merits of this case, the Examiner is rejects claims 8 - 14 and 20 under 35 USC §102(b) as being anticipated by U.S. Patent Application 2001/0031365 to Anderson. The applicants respectfully request reconsideration of this rejection.

The Examiner alleges that Anderson discloses all of the layers of the claimed invention and concludes by reciting that Anderson et al. discloses low index of refraction layers having thicknesses that would be considered less than 1/4 of some wavelength.

The applicants submit, however, that Anderson is not concerned with stresses onto an optical semiconductor device, such stresses typically found with an optical multilayer film formed by stacking layers. Also, Anderson not consider tensile stresses and compressive stresses of the individual layers, and does not combine layers in a manner that results in the tensile and compressive stresses cancelling each other.

In view of the above, with respect to Anderson's disclosure, claim 8 has been amended in order to include having tensile and compressive stresses of the layers substantially cancelling each other. Support for such claim amendments is found in the applicants' specification at page 9, line 15 to page 10, line 25.

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In view of the above, not all of the claimed elements, as now set forth in independent claim 8, are found in exactly the same situation and united in the same way to perform the identical function in Anderson's apparatus. Thus, there can be no anticipation of the applicants' claimed invention, as now set forth in independent claim 8, based on the teachings of Anderson.

Accordingly, the withdrawal of the outstanding anticipation rejection under 35 USC §102(b) based on U.S. Patent Application 2001/0031365 to Anderson is in order, and is therefore respectfully solicited.

As to the outstanding obviousness rejections, the Examiner first rejects claim 15 under 35 USC §103(a) as being unpatentable over Anderson in view of U.S. Patent No. 6,222,967 to Amano. The applicants respectfully request reconsideration of this rejection.

In addition to the alleged disclosure of Anderson, discussed above, it is alleged that Amano discloses a resin sealing structure of an optical module. It is submitted that Amano discloses a resin seal; however, Amano does not provide the above-discussed deficiencies in the teachings of Anderson with respect to the stresses of the layers. Thus, even if *arguendo* the teachings of Amano may be combined with the teachings of Anderson in the manner suggested by the Examiner, such combined teachings would still fall far short in fully meeting the applicants' claimed invention, as

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now set forth in claim 8 from which claim 15 depends.

Accordingly, the withdrawal of the outstanding obviousness rejection under 35 USC §103(a) based on Anderson in view of U.S. Patent No. 6,222,967 to Amano is in order, and is therefore respectfully solicited.

Second, the Examiner also rejects claims 16, 17 and 19 under 35 USC §103(a) as being unpatentable over Anderson, and third, rejects claim 18 as being unpatentable over Anderson in view of U.S. Patent No. 6,222,967 to Amano.

The Examiner alleges that although Anderson does not specifically disclose the claimed optical characteristics, that the composition and structure of the device in the present application is the same as the disclosure of Anderson and that the device would inherently exhibit the claimed optical characteristics. The applicants respectfully request reconsideration of these rejections.

As indicated above, the applicants have highlighted, in independent claim 16, the “optical reflection characteristics,” and have further amended independent claim 16 in order to highlight the fact that the first optical reflection characteristics of the multilayer film and the second optical reflection characteristics of the multilayer film are substantially the same; and that the tensile stresses

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and compressive stresses of the first, second, and third layers substantially cancel each other. As described in lines 14 - 20, page 8 and lines 6 - 14, page 9 of the applicants' specification, the instant optical multilayer film substantially equally functions as a reflection preventing film both for evaluation and actual use.

On the other hand, Anderson is not concerned with stresses onto an optical semiconductor device, such stresses typically found with an optical multilayer film formed by stacking layers. Also, Anderson does not consider tensile stresses and compressive stresses of the individual layers, and does not combine layers in a manner that results in the tensile and compressive stresses canceling each other.

The teachings relied upon by the Examiner in Amano do not supplement the above-discussed deficiencies or drawbacks in the teachings of Anderson in failing to fully meet the applicants' claimed invention, as now set forth in independent claim 16 from which claim 18 depends.

In view of the above, the withdrawal of the outstanding obviousness rejections under 35 USC §103(a) as being unpatentable over Anderson, and under 35 USC §103(a) based on Anderson in view of Amano is in order, and is therefore respectfully solicited.

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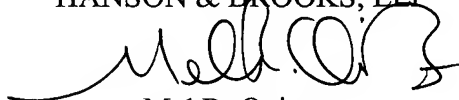
In view of the aforementioned amendments and accompanying remarks, claims, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper to Deposit Account No. 01-2340.

Respectfully submitted,

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